

Items for Long-Term Storage as of 02/2003

Site¹	Innocuous²	Pressure Generating	Pressure and Corrosion	Other
Hanford	608	1018	480	62
SRS	880	20	10	0
<u>RFETS</u>	<u>300</u>	<u>151</u>	<u>1468</u>	<u>0</u>
Totals	1180	171	1478	0
LANL	?	?	?	?
LLNL	?	?	?	?

¹RFETS materials are expected to be stored at SRS; hence the surveillance requirements at SRS are for the combined inventory.

²Includes metal as well as oxides.

Items Initially Assigned to Bins

Site	Item Description	Bin
Hanford	<ul style="list-style-type: none"> • Oxide from Product Nitrate • Oxide from CML Nitrate • Oxide from Mg(OH)₂ Precip. • Oxide from Miscellaneous Solutions (Cats and Dogs) • Oxide from Miscellaneous Filtrates • Oxide from Polycubes • Product Oxide, >85% Pu • RF Oxide • Impure Oxide, 30-85% Pu • MOX • Metal/Alloy • “Other” Alloys, Sources • Oxide from Metal Brushing/Burning 	<ul style="list-style-type: none"> • Pressure • Pressure • Pressure • Other • Other • Pressure • Pressure • Pressure & Corrosion • Pressure & Corrosion • Innocuous • Innocuous • Pressure • Innocuous
Rocky Flats	<ul style="list-style-type: none"> • Cast Metal Burned to Oxide • Chloride Contaminated Pu Metal Burned to Oxide • High Am Metal Burned to Oxide • High Assay Pu/Np Metal Burned to Oxide • Low Assay Pu/Np Metal Burned to Oxide • Anode Heels from Pu/Np • Free Metal Burned to Oxide • Pure Pu Oxide Produced via Aqueous Purification • Hanford PUREX Oxide • Impure Oxides Produced via Aqueous Purification • Product Oxides Produced by Burning Metal • Product Oxides: Rejects and Standards • Product Oxides: Rejects and Standards (LOI failures) • Pu/EU Oxides • Pu/Np Oxides • Byproduct Pu Oxide from MSE (IDC # 319) • Byproduct Pu Oxide from MSE (IDC # 067, 086) • Byproduct Oxides from Foundry Operations • Dissolver Heels • Solution Stabilization Mg/Pu/EU Oxides (IDC# 053) • Solution Stabilization Generated Pu Oxides 	<ul style="list-style-type: none"> • Innocuous • Pressure & Corrosion • Pressure • Innocuous • Pressure • Pressure & Corrosion • Innocuous • Pressure • Innocuous • Pressure • Pressure & Corrosion • Innocuous • Pressure & Corrosion • Pressure & Corrosion • Innocuous • Pressure & Corrosion • Pressure & Corrosion • Pressure & Corrosion • Pressure • Pressure
SRS	<ul style="list-style-type: none"> • Metal • Chloride/Corrosive Contaminated Oxide • Potentially Hygroscopic Oxide • Innocuous Oxide 	<ul style="list-style-type: none"> • Innocuous • Pressure & Corrosion • Pressure • Innocuous

Strategy for Initial Surveillance Sample Selection

- **The requisite number of surveillance samples per bin is based on maximizing the probability of detecting a problem if one exists.**
- **The sampling strategy is based on having a probability of 95% of seeing at least one item from the worst 10% of the containers.**
- **When this sampling strategy is coupled with the expected number of items at each storage site in each bin, shown in Table entitled “Items for Long-Term Storage as of 02/2003”, the numbers of samples and surveillance measures identified in Table entitled “Surveillance Sample Selection” are needed.**

Surveillance Sample Selection

Bin	Surveillance at Storage Site	Surveillance at Analysis Site	Number of Samples¹
Innocuous	<ul style="list-style-type: none"> • Visual Inspection • NDE: Lid Deflection, Outer Can Smear. 	<ul style="list-style-type: none"> • NDA/NDE • DE 	<p>3 Total</p> <p>Hanford: 1 (NDE at HF)</p> <ul style="list-style-type: none"> • RFETS/SRS: 2 (NDE at SRS)
Pressure Generating	<ul style="list-style-type: none"> • Visual Inspection • NDE: Lid Deflection or Pressure Sensor (HF Site), Outer Can Smear, NMI. 	<ul style="list-style-type: none"> • NDA/NDE • DE • Headspace Gas 	<p>29 Total</p> <ul style="list-style-type: none"> • Hanford: 25 (17 NDE at HF, 8 NDE Samples in LANL Shelf Life Program) • RFETS/SRS: 4 (3 NDE at SRS, 1 NDE Sample in LANL Shelf Life Program)
Pressure Generating and Corrosive	<ul style="list-style-type: none"> • Visual Inspection • NDE: Lid Deflection or Pressure Sensor (HF Site), Outer Can Smear, NMI, Prompt Gamma if needed, Weight • NDA. 	<ul style="list-style-type: none"> • NDA/NDE • DE • Headspace Gas 	<p>29 Total</p> <ul style="list-style-type: none"> • Hanford: 7 (3 DE at HF, 4 NDE in LANL Shelf Life Program) • RFETS/SRS: 22 (11 DE at SRS, 11 NDE in LANL Shelf Life Program)
Other	Same as Pressure Generating and Corrosive	Same as Pressure Generating and Corrosive + TBD.	<p>24 Total</p> <ul style="list-style-type: none"> • Hanford: 24 (12 DE at HF, 12 NDE in LANL Shelf Life Program)

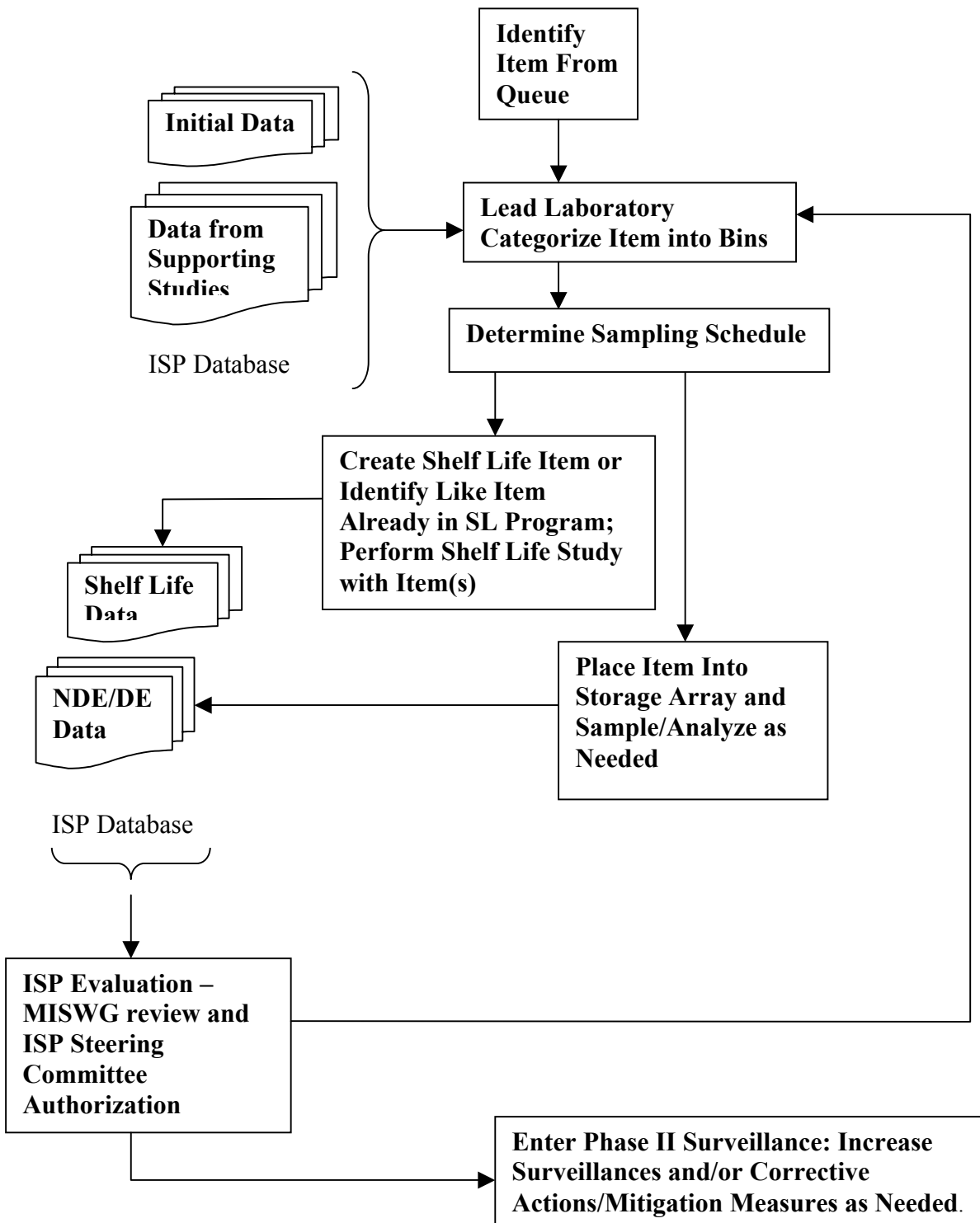
			<ul style="list-style-type: none">• RFETS/SRS: 0
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**Proposed Minimum ISP DE and DE
Surveillance Examinations
(at the 90%) Confidence Level**

Hanford 33

SRS 21

Shelf-life 36



Data Flow in Surveillance Program